

Claims:

1. An aqueous composition useful for polishing copper on a semiconductor wafer comprising by weight percent up to 25 oxidizer, 0.05 to 1 inhibitor for a nonferrous metal, 0.01 to 5 complexing agent for the nonferrous metal, 0.01 to 5 modified cellulose, and balance water wherein said composition is free of polyacrylic acids.
2. The composition of claim 1 wherein the modified cellulose is water soluble cellulose modified with carboxylic acid functionality from the group consisting of carboxy methyl cellulose, agar gum, arabic gum, ghatti gum, karaya gum, guar gum, pectin, locust bean gum, tragacanth gums, tamarind gum, carrageenan gum, and xanthan gum, modified starch, alginic acid, mannuronic acid, guluronic acid, and their modifications, copolymers, and mixtures.
3. The composition of claim 2 wherein the modified cellulose is carboxy methyl cellulose.
4. The composition of claim 3 wherein said carboxy methyl cellulose has a degree of substitution of 0.1 to 3.0 and a molecular weight of 20K to 1000K
5. The composition of claim 1 comprising 0.01 to 10 weight percent abrasive.
6. A method for polishing of copper on a semiconductor wafer comprising, contacting the wafer with a polishing composition, the wafer containing the copper, the polishing composition comprising by weight percent up to 25 oxidizer, 0.05 to 1 inhibitor for a nonferrous metal, 0.01 to 5 complexing agent for the nonferrous metal, 0.01 to 5 modified cellulose, and balance water, wherein said composition is free of polyacrylic acid, and polishing the wafer with a polishing pad
7. The method of claim 6 wherein the modified cellulose is water soluble cellulose modified with carboxylic acid functionality from the group consisting of carboxy

methyl cellulose, agar gum, arabic gum, ghatti gum, karaya gum, guar gum, pectin, locust bean gum, tragacanth gums, tamarind gum, carrageenan gum, and xantham gum, modified starch, alginic acid, mannuronic acid, guluronic acid, and their modifications, copolymers, and mixtures.

8. The method of claim 7 wherein the modified cellulose is carboxy methyl cellulose.
9. The method of claim 8 wherein said carboxy methyl cellulose has a degree of substitution of 0.1 to 3.0 and a molecular weight of 20K to 1000K
10. The method of claim 6 wherein said composition comprises 0.01 to 10 weight percent abrasive.